

CLAIMS

1. An external power source control system for a portable telephone comprising:

5 a regulator connected at an input thereof to a battery power source or an external power source and controlled to output a power supply voltage;

a one-shot pulse generating circuit generating a one-shot pulse when the external power source is
10 connected to the portable telephone;

a reset circuit outputting a reset signal when the power supply voltage from said regulator reaches a predetermined threshold level; and

a controller causing said regulator to output
15 the power supply voltage, based on the one-shot pulse generated by said one-shot pulse generating circuit, maintaining an output of the power supply voltage from said regulator, based on the one-shot pulse generated by said one-shot pulse generating
20 circuit, and canceling the maintenance of the output of the power supply voltage from said regulator, based on a predetermined instruction indicating that the power is not necessary.

25 2. The external power source control system for a portable telephone according to claim 1, wherein said controller comprises:

a pulse generating circuit generating a pulse, based on the one-shot pulse generated by said one-
30 shot pulse generating circuit and the reset signal

output from said reset circuit;

an RS latch having an output thereof set, based on the pulse generated by said pulse generating circuit;

5 an OR circuit causing said regulator to output the power supply voltage, based on the one-shot pulse generated by said one-shot pulse generating circuit or the output set in the RS latch; and

10 a register generating a pulse for resetting the RS latch when a write access to said register occurs as a result of the predetermined instruction indicating that the power is not necessary.

3. The external power source control system
15 for a portable telephone according to claim 1, further comprising a power key connected to the battery power source and causing the battery power to be output from said regulator, wherein

20 said controller maintains the output of the power supply voltage from said regulator, based on the reset signal output from said reset circuit while the power key is being depressed.

4. The external power source control system
25 for a portable telephone according to claim 3, wherein said controller comprises:

30 a first pulse generating circuit generating a first pulse, based on the one-shot pulse generated by said one-shot pulse generating circuit and the reset signal output from said reset circuit;

a second pulse generating circuit generating a second pulse, based on the reset signal output from said reset circuit while the power key is being depressed;

5 a first OR circuit receiving the first pulse generated by said first pulse generating circuit or the second pulse generated by said second pulse generating circuit, and providing one of the first pulse and the second pulse at an output of said
10 first OR circuit;

an RS latch having an output thereof set, based on one of the first pulse and the second pulse output from said first OR circuit;

15 a second OR circuit for causing said regulator to output the power supply voltage, when one of the one-shot pulse generated by said one-shot pulse generating circuit and the output set in the RS latch occurs; and

20 a register generating a pulse for resetting the RS latch when a write access to said register occurs as a result of a predetermined instruction indicating that the power is not necessary.

25 5. The external power source control system for a portable telephone according to claim 1, wherein

said controller cancels the maintenance of the output of the power supply voltage from said regulator when the power supply voltage drops below
30 a predetermined threshold level so that said reset

circuit no longer outputs the reset signal.

6. The external power source control system for a portable telephone according to claim 5, wherein said controller comprises:

a pulse generating circuit generating a pulse, based on the one-shot pulse generated by said one-shot pulse generating circuit and the reset signal output from said reset circuit;

10 an RS latch having an output thereof set, based on the pulse generated by said pulse generating circuit;

a second OR circuit for causing said regulator to output the power supply voltage, when one of the one-shot pulse generated by said one-shot pulse generating circuit and the output set in the RS latch occurs;

a register generating a pulse when a write access to said register occurs as a result of a predetermined instruction indicating that the power is not necessary; and

a third OR circuit resetting the RS latch, based on the pulse generated by said register, and also resetting said RS latch when the power supply voltage output from said regulator drops below a predetermined level so that said reset circuit no longer outputs the reset signal.

7. An external power source control system for a portable telephone, comprising:

a regulator connected at an input thereof to a battery power source or an external power source and controlled to output a power supply voltage;

a first reset circuit outputting a first reset
5 signal when an input voltage, input as a result of the battery power source or the external power source being connected to a circuitry of the portable telephone, reaches a predetermined threshold level;

10 a second reset circuit outputting a second reset signal when the power supply voltage output from said regulator reaches a predetermined threshold level;

a clock generating circuit generating a clock
15 when the battery power source or the external power source is connected to the circuitry of the portable telephone; and

a controller causing said regulator to output the power supply voltage, based on the external
20 power source, the reset signal output from said first reset circuit, the clock generated by said clock generating circuit, maintaining the output of the power supply voltage from said regulator, based on the external power source, the first reset
25 signal output from said first reset circuit, the clock generated by said clock generating circuit, and canceling the maintenance of the power supply voltage from said regulator, based on a predetermined instruction indicating that the power
30 is not necessary.

8. The external power source control system for a portable telephone according to claim 7, wherein said controller comprises:

first and second flip-flops having an output
5 thereof reset by the first reset signal output from said first reset circuit, and shifting a logic value of the external power source, based on the clock generated by said clock generating circuit;

an AND circuit generating a one-shot pulse,
10 based on the outputs from said first and second flip-flops;

a pulse generating circuit generating a pulse,
based on the one-shot pulse generated by said AND circuit and the second reset signal output from
15 said second reset circuit;

an RS latch having an output thereof set,
based on the pulse generated by said pulse generating circuit;

an OR circuit causing said regulator to output
20 the power supply voltage, based on the one-shot pulse generated by said AND circuit or the output set in the RS latch; and

a register generating a pulse for resetting the RS latch when a write access to said register
25 occurs as a result of a predetermined instruction indicating that the power is not necessary.

9. The external power source control system for a portable telephone according to claim 7,
30 wherein said controller comprises:

first, second and third flip-flops having an output thereof reset by the first reset signal output from said first reset circuit, and shifting a logic value of the external power source, based on the clock generated by said clock generating circuit;

an AND circuit generating a one-shot pulse, based on the outputs from said first, second and third flip-flops;

10 a pulse generating circuit generating a pulse, based on the one-shot pulse generated by said AND circuit and the second reset signal output from said second reset circuit;

15 an RS latch having an output thereof set, based on the pulse generated by said pulse generating circuit;

an OR circuit causing said regulator to output the power supply voltage, based on the one-shot pulse generated by said AND circuit or the output set in the RS latch; and

20 a register generating a pulse for resetting the RS latch when a write access to said register occurs as a result of a predetermined instruction indicating that the power is not necessary.

25

10. The external power source control system for a portable telephone according to claim 7, further comprising a power key connected to the battery power source and causing the battery power to be output from said regulator, wherein

said controller maintains the output of the power supply voltage from said regulator, based on the second reset signal output from said second reset circuit while the power key is being
5 depressed.

11. The external power source control system for a portable telephone according to claim 7, wherein

10 said controller cancels the maintenance of the output of the power supply voltage from said regulator when the power supply voltage drops below a predetermined threshold level so that said second reset circuit no longer outputs the second reset
15 signal.